

PATENT
Atty. Docket No.:
CIBT 101-097

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Papadimitriou et al.

Serial No.: 09/890,053

Filed: October 19, 2001

Group Art Unit: 1653

Examiner: Not Yet Assigned

Title: PHARMACEUTICAL COMPOSITION OF HYDROPHOBICALLY
MODIFIED HEDGEHOG PROTEINS AND THEIR USE

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

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Anna P. Lucey

Commissioner for Patents
United States Patent and Trademark Office
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.97(b)

Submitted herewith on Form PTO-1449 is a list of documents known to Applicants, their Agent and/or Attorney in compliance with the requirements of 37 C.F.R. 1.56. A copy of each document listed is also being submitted herewith.

This Information Disclosure Statement is being filed before the mailing of the first office action on the merits; therefore, no fee is due.

CIBT-P01-097
09/890,053

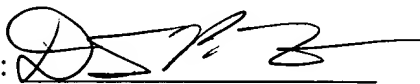
Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached Form PTO-1449.

This submission does not represent that a search has been made or that no better art exists. Nor does it constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and applicants determine that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents.

Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

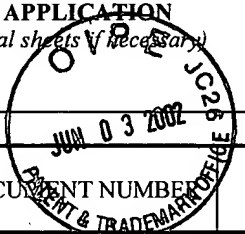
If there are any fees due in connection with the filing of this Statement, please charge the fees to our **Deposit Account, No. 18-1945.**

Respectfully submitted,
Ropes & Gray

By: 

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Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)		Docket Number (Optional) CIBT-P01-097		Application Number 09/890,053		
		Applicant Papadimitriou et al.		Group Art Unit +653- 1646		
		Filing Date October 19, 2001				
U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	FILING DATE IF APPROPRIATE	
EA	AA	4,614,794	Easton et al.			
FOREIGN PATENT DOCUMENTS						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES NO
EA	AB	GB 1,184,502	United Kingdom			
	AC	GB 1,204,438	United Kingdom			
	AD	GB 990,276	United Kingdom			
	AE	EP 0978285 A1	Euro. Patent Application			
	AF	EP 0953576 A1	Euro. Patent Application			
	AG	EP 0947201 A1	Euro. Patent Application			
	AH	WO 94/08599	PCT			
✓	AI	WO 90/08551	PCT			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages Etc.)						
EA	AJ	Asahina, I. et al. Human Osteogenic Protein-1 Induces Chondroblastic, Osteoblastic, and/or Adipocytic Differentiation of Clonal Murine Target Cells. <i>Exp. Cell Res.</i> 222, 38-47 (1996).				
	AK	Bitgood, M. J. et al. Sertoli cell signaling by Desert hedgehog regulates the male germline. <i>Current Biology</i> 6, 298-304 (1996).				
	AL	Chiang, C. et al. Cyclopia and defective axial patterning in mice lacking <i>Sonic hedgehog</i> gene function. <i>Nature</i> 383, 407-413 (3 Oct. 1996).				
	AM	Downs, E. C. et al. Calcium Alginate Beads as a Slow-Release System for Delivering Angiogenic Molecules in Vivo and in Vitro. <i>J. Cell. Physiol.</i> 152, 422-429 (1992).				
	AN	Farese, R. V. Jr. & Herz, J. Cholesterol metabolism and embryogenesis. <i>TIG</i> 14, 115-120 (March 1998).				
	AO	Fietz, M. J. et al. The <i>hedgehog</i> gene family in <i>Drosophila</i> and vertebrate development. <i>Development Suppl.</i> 43-51 (1994).				
	AP	Gray, C. J. & Dowsett, J. Retention of Insulin in Alginate Gel Beads. <i>Biotech. & Bioeng.</i> 31, 607-612 (1988).				
✓	AQ	Hammerschmidt, M. et al. The world according to hedgehog. <i>TIG</i> 13, 14-21 (January 1997).				

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Form PTO-1449

INFORMATION DISCLOSURE CITATIONS

IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)
CIBT-P01-097Applicant
Papadimitriou et al.Filing Date
October 19, 2001Application Number
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~~1633~~ 1646

CA	AR	Hancock, J. F. et al. A Polybasic Domain or Palmitoylation Requires Addition to the CAAX Motif to Localize p21 ^{ras} to the Plasma Membrane. <i>Cell</i> 63, 133-139 (5 Oct. 1990).
	AS	Haque, Z. et al. Incorporation of Fatty Acid into Food Protein: Palmitoyl Soybean Glycinin. <i>J. Agric. Food Chem.</i> 30, 481-486 (1982).
	AT	Haque, Z. & Kito, M. Lipophilization of α s1-Casein. 1. Covalent Attachment of Palmitoyl Residue. <i>J. Agric. Food Chem.</i> 31, 1225-1230 (1983).
	AU	Hynes, M. et al. Induction of Midbrain Dopaminergic Neurons by Sonic Hedgehog. <i>Neuron</i> 15, 35-44 (July 1995).
	AV	Illum, L. et al. Hyaluronic acid ester microspheres as a nasal delivery system for insulin. <i>J. Controlled Release</i> 29, 133-141 (1994).
	AW	Karaplis, A. C. et al. Lethal skeletal dysplasia from targeted disruption of the parathyroid hormone-related peptide gene. <i>Genes & Development</i> 8, 277-289 (1994).
	AX	Kawaguchi, Y. et al. Conformational changes of hyaluronates with partial palmitoylation and the absorption structures on the surface of oil droplets. <i>Carbohydrate Polymers</i> 20, 183-187 (1993).
	AY	Kawaguchi, Y. et al. The effects of polysaccharide chain-length in coating liposomes with partial palmitoyl hyaluronates. <i>Carbohydrate Polymers</i> 18, 139-142 (1992).
	AZ	Kikuchi, A. et al. Pulsed dextran release from calcium-alginate gel beads. <i>J. Controlled Release</i> 47, 21-29 (1997).
	BA	Kinto, N. et al. Fibroblasts expressing Sonic hedgehog induce osteoblast differentiation and ectopic bone formation. <i>FEBS Letters</i> 404, 319-323 (1997).
	BB	Lai, C.-J. et al. Patterning of the neural ectoderm of <i>Xenopus laevis</i> by the amino-terminal product of hedgehog autoproteolytic cleavage. <i>Development</i> 121, 2349-2360 (1995).
	BC	Lopez-Martinez, A. et al. Limb-patterning activity and restricted posterior localization of the amino-terminal product of Sonic hedgehog cleavage. <i>Current Biology</i> 5, 791-796 (1995).
	BD	Marti, E. et al. Requirement of 19K form of Sonic hedgehog for induction of distinct ventral cell types in CNS explants. <i>Nature</i> 375, 322-325 (25 May 1995).
	BE	Miao, N. et al. Sonic Hedgehog Promotes the Survival of Specific CNS Neuron Populations and Protects These Cells from Toxic Insult in Vitro. <i>J. Neurosci.</i> 17, 5891-5899 (1 August 1997).
	BF	Nakamura, T. et al. Induction of Osteogenic Differentiation by Hedgehog Proteins. <i>Biochem. Biophys. Res. Comm.</i> 237, 465-469 (1997).
	BG	Pepinsky, R. B. et al. Identification of a Palmitic Acid-modified Form of Human Sonic hedgehog. <i>J. Biol. Chem.</i> 273, 14037-14045 (1998).
V	BH	Perrimon, N. Hedgehog and Beyond. <i>Cell</i> 80, 517-520 (24 February 1995).

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Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)		Docket Number (Optional) CIBT-P01-097	Application Number 09/890,053
		Applicant Papadimitriou et al.	
		Filing Date October 19, 2001	Group Art Unit 1653 1646
EA	BI	Porter, J. A. et al. Cholesterol Modification of Hedgehog Signaling Proteins in Animal Development. <i>Science</i> 274, 255-259 (11 October 1996).	
	BJ	Porter, J. A. et al. Hedgehog Patterning Activity: Role of a Lipophilic Modification Mediated by the Carboxy-Terminal Autoprocessing Domain. <i>Cell</i> , 86, 21-34 (12 July 1996).	
	BK	Robinson, C. J. Neurotrophic factors – novel therapeutics. <i>TIBTECH</i> 14, 451-452 December 1996).	
	BL	Smith, J. C. Hedgehog, the Floor Plate, and the Zone of Polarizing Activity. <i>Cell</i> 76, 193-196 (28 January 1994).	
	BM	Stott, N. S. & Chuong, Cheng-Ming. Dual action of sonic hedgehog on chondrocyte hypertrophy: retrovirus mediated ectopic sonic hedgehog expression in limb bud micromass culture induces novel cartilage nodules that are positive for alkaline phosphatase and type X collagen. <i>J. Cell. Sci.</i> 110, 2691-2701 (1997).	
	BN	Vortkamp, A. et al. Regulation of Rate of Cartilage Differentiation by Indian Hedgehog and PTH-Related Protein. <i>Science</i> 273, 613-622 (1996).	
	BO	Webb, R. J. et al. Hydrophobic Mismatch and the Incorporation of Peptides into Lipid Bilayers: A Possible Mechanism for Retention in the Golgi. <i>Biochemistry</i> 37, 673-679 (1998).	
	BP	Wozney, J. M. Bone Morphogenetic Proteins and Their Gene Expression. <i>Cell. & Mol. Biol. Of Bone.</i> 4, 131-167 (1993).	
↓	BQ	Yang, Y. et al. Relationship between dose, distance and time in Sonic Hedgehog-mediated regulation of anteroposterior polarity in the chick limb. <i>Development</i> 124, 4393-4404 (1997).	
EXAMINER <i>Eileen B.O'Hara</i>		DATE CONSIDERED 8/15/03	
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.			

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